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EXAMINER	
MOHAMED, A	

ART UNIT	PAPER NUMBER
1815	19

DATE MAILED: 11/09/92

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This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined ☒ Responsive to communication filed on 8/31/92 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), ____ days from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice re Patent Drawing, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, Form PTO-152
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____.

Part II SUMMARY OF ACTION

1. ☒ Claims 1-2, 9, 11-13, 15-19 and 20 are pending in the application.

   Of the above, claims _____ are withdrawn from consideration.

2. ☒ Claims 3-8, 10 and 14 have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1-2, 9, 11-13, 15-19 and 20 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

The communication filed 8/31/92 is acknowledged. In view of Applicants request claims 3-8, 10 and 14 have been canceled and claims 1-2, 9, 11-13, 15-19 and 20 are now pending in the application. NEW CLAIM 21 WAS RENUMBERED AS "20" SINCE THERE WAS NO CLAIM 20 PREVIOUSLY PRESENTED. 37 CFR 1.126.

Applicant's arguments filed 8/31/92, have been fully and carefully considered but they are not deemed to be persuasive.

35 U.S.C. § 101 reads as follows:

> **Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.**

Claims 1-2, 9, 11-13, 15-18 and 20 are rejected under 35 U.S.C. § 101 because the claimed invention lacks patentable utility and the invention as disclosed is inoperative and therefore lacks utility.

The rejection is maintained essentially for the reasons set forth in the previous Office action. Applicants argument in regard to demonstrate the in vivo utility and operability of the claimed invention is noted. However, the claimed oral tolerization treatment has not been adequately proven to be effective, and that the rodent data set forth in the specification do not support the effectiveness of the claimed treatment for all of the autoimmune diseases recited in the claims and do not support its effectiveness for humans. Further, the provisions for 35 USC 101 require utility for any and all patentable subject matter and the utility may not be based on

mere assertion but rather must be definite and in currently available form (See Brenner v. Manson, 383, US. 519, 148 USPQ 689, 1966).

In the originally filed specification, Applicants have failed to provide proof of utility with regard to a method for the treatment of T cell-mediated or T cell- dependent autoimmune disease in humans, either clinical or in vivo to convince one of ordinary skill in the art. Applicant urge that oral tolerization has been clinically tested in humans for three different autoimmune conditions. Providing such clinical data in a form of a Rule 132 declaration would be a way to overcome this rejection and is necessary for an adequate disclosure of the invention.

With respect to claim 2, the Examiner concedes that the claim is not indefinite. However, as Applicants acknowledged; the claim is broad and the specification does not provide an adequate description of claim as broadly claimed which encompasses various autoimmune diseases for the reasons discussed above.

Accordingly, filing of evidence of utility in recognized animal models and/or clinical evidence with controlled reasonable experimental size commensurate in scope with the claims is suggested.

The following is a quotation of the first paragraph of 35 U.S.C. § 112:

> **The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.**

The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to adequately teach one of ordinary skill in the art how to make and use the claimed invention, i.e. failing to provide an enabling disclosure.

The disclosure is insufficient to support for to support a method for treating T cell-mediated or T cell-dependent autoimmune diseases in humans by oral or enteral administration as encompassed by the claims for the reasons discussed supra.

Claims 1-2, 9, 11-13, 15-18 and 20 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

Claims 9, 15-19 and 20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9 is substantially duplicate of claim 1 since they claim the same subject matter and there would appear to be no difference in scope (See MPEP 706.03 [k]).

Claims 15 and 19 are indefinite and confusing in the recitation "biologically active fragments" because this term does not specify the nature of the biological activity.

Claim 19 is indefinite and vague in the recitation "an analog thereof" because it is not clear to what kind of analog the claim is referring. Clarification is requested.

Claim 20 is duplicate of claim 1. Further, there is no claim

21 in the originally filed specification and it is not clear if this claim is intended to be entered as a new claim or amended. Clarification is required.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-2, 9, 11-13, 15-18 and 20 are rejected under 35 U.S.C. § 103 as being unpatentable over Campbell et al in view of Whitacre et al and/or further in view of Nagler-Anderson et al.

The rejection under 35 USC 103 is maintained essentially for the reasons set forth in the previous Office action. Applicants have argued that the mechanism of intravenous tolerance is totally different from that of oral tolerance. The Examiner agrees. However, the primary reference of Campbell et al was combined in view of Whitacre et al and/or further in view of Nagler-Anderson et al in which the secondary references clearly disclose the oral administration of MBP or collagen to protect the development of autoimmune diseases including multiple sclerosis.

With respect to Applicants allegation that it would not have been obvious to extrapolate Whitacre et al or Nagler-Anderson et al teachings to humans. The Examiner disagrees in view of the fact that events and pathways commons to humans and rodents are operating in induction of oral tolerance as acknowledged by Applicants and in view of the fact that rodents are acceptable animal models for autoimmune diseases (See Applicants response in Paper No. 18). Therefore, contrary to Applicants allegation; one

of ordinary skill in the art would have been motivated to extrapolate the teachings of Whitacer's or Nagler-Anderson's Thompson's oral administration of MBP or collagen to rats to suppress subsequent induction of MBP or collagen-induced arthritis in humans.

Accordingly, claims 1-2, 9, 11-13, 15-18 and 20 are prima facie obvious over the prior art, absent of sufficient objective factual evidence or unexpected results to the contrary.

Claim 19 is rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103 as obvious over Eylar.

The rejection of claim 19 under 35 USC 102/103 (b) is maintained for the same reasons discussed in the previous Office action since there is no response from Applicants in regard to this rejection.

Claims 1, 9 and 11-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patent as being unpatentable over claims 1, 4, 9 and 17-18 of copending application Serial No. 07/596,936. Although the conflicting claims are not identical, they are not patentably distinct from each other because the two sets of claims are considered to be the same or so closely related to constitute as one invention. The same method for treating of a T cell-mediated or T cell-dependent autoimmune disease by oral or enteral administration of autoantigen are used. Therefore, one of skill in the art would envision both sets of method claims as one invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The obviousness-type double patenting rejection is a judicially established doctrine based upon public policy and is primarily intended to prevent prolongation of the patent term by prohibiting claims in a second patent not patentably distinct from claims in a first patent. In re Vogel, 164 U.S.P.Q. 619 (CCPA 1970). A timely filed terminal disclaimer in compliance with 37 C.F.R. 1.321(b) would overcome an actual or provisional rejection on this ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R. 1.78(d).

Claims 1-2, 9, 11-13, 15-19 and 20 are rejected under 35 U.S.C. § 112, first and second paragraphs, as the claimed invention is not described in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same, and/or for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "autoantigen", "suppressive fragment", "immunosuppressive portion", "active fragment" and "analog" are indefinite and vague because they do not identify what kind of

autoantigen, suppressive fragment, immunosuppressive portion, active fragment and analog are used. Further, these terms are broad and are not justified by the limited exemplary disclosure in the specification. It would include those that have not been shown or taught to be useful or operable by the disclosed method of making and using the invention.

Accordingly, amendment of the claims to what is supported by the enabling disclosure or filing of evidence in a form of a Rule 132 declaration providing factual evidence supporting the broad range claimed is suggested.

The Art Unit location of your application in the Patent and Trademark Office has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1815.

Papers relating to this application may be submitted to Group 180 by facsimile transmission. Papers should be faxed to Group 180 via the P.T.O. Fax Center located in Crystal Mall 1. The CM1 Fax Center number is (703) 308-4227. Papers may be submitted Monday-Friday between 8:00 am and 4:45 pm (EST). Please note that the faxing of such papers must conform with the Notice published in the Official Gazette, 1096 OG 30, (November 15, 1989).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdel A Mohamed whose telephone number is (703) 308-3966.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

AAM Mohamed/AAM
November 5, 1992

MICHAEL G. WITYSHYN
PRIMARY EXAMINER
GROUP 180
11-7